CLAIMS:

1.   Apparatus for simultaneous transmission of at least a first signal and a second
signal, each one of said signals comprising a data sequence and a training sequence
characterized in that said apparatus is arranged to simultaneously transmit a training sequence
of said first signal and a data sequence of said second signal.

5

2.   Apparatus according to claim 1, characterized in that said apparatus is
arranged to minimize a correlation between said training sequence of said first signal and said
data sequence of said second signal.

10   3.   Apparatus according to claim 2, characterized in that said apparatus is being
arranged to repeatedly minimize said correlation.

4.   Apparatus according to claim 2, characterized in that said apparatus is
arranged to minimize said correlation by selecting said training sequence from a group of
15   possible training sequences, said selected training sequence being arranged to have minimal
correlation with said data sequence.

5.   Apparatus according to claim 2, characterized in that said apparatus is
arranged to minimize said correlation by interleaving said data sequence.

20

6.   Apparatus according to claim 2, characterized in that said apparatus is
arranged to minimize said correlation by modulating said training sequence with a first
modulation and to modulate said data sequence with a second modulation.

25   7.   Module for use in an apparatus as claimed in claims 2,3,4,5 or 6 wherein said
module is arranged to minimize a correlation between a training sequence of a first signal and
a data sequence of a second signal.

8.   Simultaneous signals for transmission by an apparatus as claimed in claims 1,
2, 3, 4, 5 or 6 said simultaneous signals comprising at least a first signal and a second signal,
said first signal and said second signal comprising a data sequence and a training sequence
wherein, a trainings sequence of said first signal and a data sequence of said second signal

5   are arranged to be simultaneously transmitted.